

LA-UR-21-21671

Approved for public release; distribution is unlimited.

IC W20_thermoelasticity Highlight: Dynamic strength - shear modulus scaling for tantalum at extreme pressures Title:

Author(s): Burakovsky, Leonid

Blaschke, Daniel

Preston, Dean Laverne

Intended for: Report

Issued: 2021-02-22



IC W20_thermoelasticity Highlight: Dynamic strength - shear modulus scaling for tantalum at extreme pressures

Leonid Burakovsky (PI), T-1, Daniel Blaschke, XCP-5, and Dean Preston, XCP-5

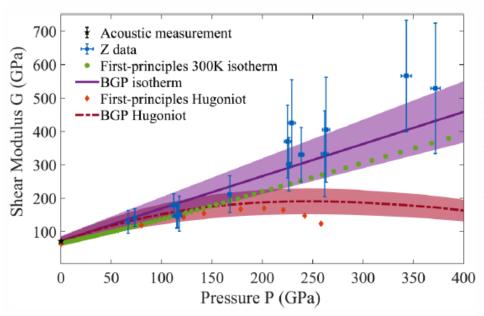


Fig. 1. Pressure dependence of the shear modulus of Ta for two fundamental curves: the 300 K isotherm and the Hugoniot.

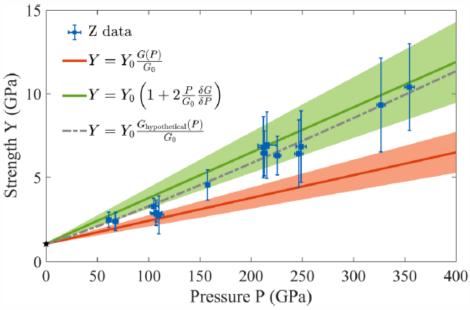


Fig. 2. Scaling of the high pressure strength (*Y*) of Ta with shear modulus (*G*). The dashed curve represents a hypothetical *G* which is fit such that the linear scaling approximation matches the data.

